UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/687,989	PILLAY ESNAULT, PADMA
	Examiner	Art Unit	
	THOMAS RICHARDSON	2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2009*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,6,8,11-13,15,18-22,26,27,30,32,33 and 39-41* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1, 6, 8, 11-13, 15, 18-22, 26, 27, 30, 32, 33, and 39-41* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Claims are pending for examination.

Claims are amended.

Claims are rejected.

Response to Arguments

1.   Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2.   Claim 41 is objected to under 37 CFR 1.75(c), as being of improper dependent form for being depending on a cancelled claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4.   Claims 1, 8, 18-22, 26, 27, 30, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 7 328 278, Pesce et al, US 2003/0231587, Sankaran et al, and US 7 554 930, Gaddis et al.

5.   As per claim 1, Pesce teaches a method comprising:

        routes exported from an exterior routing protocol executing on a network device to an interior routing protocol executing on the network device (column 2, lines 51-64, where the network element may contain multiple routing databases including those that may run both interior and exterior routing protocols, also column 3, lines 23-28, where

the routing information may be exported from one database operating in one protocol to another database operating in another protocol);

maintaining routes exported from the exterior routing protocol executing on the network device to the interior routing protocol executing on the network device (column 2, lines 51-64, where the network element may contain multiple routing databases including those that may run both interior and exterior routing protocols, also column 3, lines 23-28, where the routing information may be exported from one database operating in one protocol to another database operating in another protocol); and

blocking routes exported from the exterior routing protocol to the interior routing protocol (column 4, lines 52-61, where the updated mappings may be blocked by the manager);

updating routing information to associate the routes with a maximum metric that defines a maximum distance from the network device to neighboring network devices (column 5, lines 14-16, where each entry in the table may be associated with a metric value and scale, also column 11, lines 52-60, where routes may be associated with a metric); and

advertising the updated routing information to a network device (column 15, lines 49-51, where routes may be advertised).

Pesce does not expressly teach a client setting an export limit for the device. Sankaran teaches a method for managing discard algorithms comprising:

maintaining a count of routes exported (paragraph 35, where a threshold may be reached); and

rejecting additional routes exported when the count exceeds the export limit set by the command (paragraph 45, where additional routes may be discarded once a threshold is reached).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a route count and rejecting such as taught by Sankaran in a routing system such as taught by Pesce. Pesce's system generally allows for routes to be exported from one protocol operating on a network element to another protocol operating on a network element. Pesce further allows for blocking routes by a manager (column 4, lines 52-61). It would be beneficial in such a system to utilize a threshold and count of routes for blocking, as the routing manager may operate under blocking conditions after a threshold of a table is reached, such as a percentage of the memory being used (paragraph 45).

Neither Pesce nor Sankaran teaches a user defined size threshold. Gaddis teaches a method for improving databases comprising:

receiving a command from a client to specify a limit for a table size (column 17, lines 29-34, where a prefix limit may be set for injected routes).

It would have been obvious to utilize a user defined limit such as that taught by Gaddis in a system for exporting routes such as that taught by either Pesce or Sankaran. Pesce's system generally allows for routes to be exported according to definitions by a user, including those determining whether routes may be exported (column 7, lines 11-14). Pesce's system also allows a manager to determine when blocking conditions occur (column 4, lines 52-61). It would be beneficial to allow for a user to determine a

maximum number of routes, such as taught by Sankaran, as the routing manager may

operate under blocking conditions after a threshold of a table is reached, such as a

percentage of the memory being used (paragraph 45). It would further be beneficial for

a user to determine the maximum, such as taught by Gaddis, this allows the user to set

further rules regarding route exporting, in addition to those as taught by Pesce.

6.   As per claim 27, Pesce teaches a computer-readable medium comprising

instructions to cause a processor to:

        present a management interface to receive a command from a client (column 7,

lines 11-14, where a user may set rules governing route exportation);

        receive a command, from the client through the management interface, to specify

rules for routes exported from an exterior routing protocol executing on a network

device to an interior routing protocol executing on the network device (column 7, lines

11-14, where a user may set rules governing route exportation);

        maintain rules of routes exported from an exterior routing protocol executing on

the network device to a plurality of instances of an interior routing protocol executing on

the network device (column 7, lines 11-14, where a user may set rules governing route

exportation, also column 2, lines 51-64, where the network element may contain

multiple routing databases including those that may run both interior and exterior routing

protocols, also column 3, lines 23-28, where the routing information may be exported

from one database operating in one protocol to another database operating in another

protocol); and

identify one of the instances of the interior routing protocol to which the routes were exported (column 2, lines 51-64, where the network element may contain multiple routing databases including those that may run both interior and exterior routing protocols, also column 3, lines 23-28, where the routing information may be exported from one database operating in one protocol to another database operating in another protocol);

compare the rule for the identified one of the instances to an export limit (column 7, lines 11-14, where a user may set rules governing route exportation, also column 2, lines 51-64, where the network element may contain multiple routing databases including those that may run both interior and exterior routing protocols, also column 3, lines 23-28, where the routing information may be exported from one database operating in one protocol to another database operating in another protocol); and

reject additional routes to be exported from the exterior routing protocol to the identified one of the instances based on the comparison (column 4, lines 52-61, where the updated mappings may be blocked by the manager).

Pesce does not expressly teach a client setting an export limit for the device. Sankaran teaches a method for managing discard algorithms comprising:

maintaining a count of routes exported (paragraph 35, where a threshold may be reached); and

rejecting additional routes exported when the count exceeds the export limit set by the command (paragraph 45, where additional routes may be discarded once a threshold is reached).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to utilize a route count and rejecting such as taught by Sankaran in a routing system

such as taught by Pesce. Pesce's system generally allows for routes to be exported

from one protocol operating on a network element to another protocol operating on a

network element. Pesce further allows for blocking routes by a manager (column 4,

lines 52-61). It would be beneficial in such a system to utilize a threshold and count of

routes for blocking, as the routing manager may operate under blocking conditions after

a threshold of a table is reached, such as a percentage of the memory being used

(paragraph 45).

Neither Pesce nor Sankaran teaches a user defined size threshold. Gaddis teaches a

method for improving databases comprising:

    receiving a command from a client to specify a limit for a table size (column 17,

lines 29-34, where a prefix limit may be set for injected routes).

It would have been obvious to utilize a user defined limit such as that taught by Gaddis

in a system for exporting routes such as that taught by either Pesce or Sankaran.

Pesce's system generally allows for routes to be exported according to definitions by a

user, including those determining whether routes may be exported (column 7, lines 11-

14). Pesce's system also allows a manager to determine when blocking conditions

occur (column 4, lines 52-61). It would be beneficial to allow for a user to determine a

maximum number of routes, such as taught by Sankaran, as the routing manager may

operate under blocking conditions after a threshold of a table is reached, such as a

percentage of the memory being used (paragraph 45). It would further be beneficial for

a user to determine the maximum, such as taught by Gaddis, this allows the user to set further rules regarding route exporting, in addition to those as taught by Pesce.

7.   As per claim 30, Sankaran further teaches updating muting information to associate the routes with a maximum metric that defines a maximum distance from the network device to neighboring network devices when the count exceeds the export limit (paragraph 5, where the redundant routes may be preferenced by distance); and advertising the updated routing information to a network device (paragraph 3, where the network may redefine paths using BGP or OSPF);

updating routing information when the count exceeds the limit to clear the routes exported (paragraph 45, where routes may be deleted from the table when a limit is reached or exceeded).

Pesce further teaches waiting for user intervention before accepting routes (column 7, lines 11-14, where a user may set rules governing route exportation).

8.   As per claim 8, Pesce teaches a method comprising:

an export rule and an associated one of a plurality of instances of an interior routing protocol executing on a network device (column 7, lines 11-14, where a user may set rules governing route exportation, also column 2, lines 51-64, where the network element may contain multiple routing databases including those that may run both interior and exterior routing protocols, also column 3, lines 23-28, where the routing information may be exported from one database operating in one protocol to another database operating in another protocol);

maintaining rules of routes exported from an exterior routing protocol executing

on the network device to each of the instances of the interior routing protocol executing

on the network device (column 7, lines 11-14, where a user may set rules governing

route exportation, also column 2, lines 51-64, where the network element may contain

multiple routing databases including those that may run both interior and exterior routing

protocols, also column 3, lines 23-28, where the routing information may be exported

from one database operating in one protocol to another database operating in another

protocol);

identifying one of the instances of the interior routing protocol to which the routes

were exported (column 7, lines 11-14, where a user may set rules governing route

exportation, also column 2, lines 51-64, where the network element may contain

multiple routing databases including those that may run both interior and exterior routing

protocols, also column 3, lines 23-28, where the routing information may be exported

from one database operating in one protocol to another database operating in another

protocol);

comparing the rules for the identified one of the instances to the rule specified by

the command for the identified instance (column 7, lines 11-14, where a user may set

rules governing route exportation, also column 2, lines 51-64, where the network

element may contain multiple routing databases including those that may run both

interior and exterior routing protocols, also column 3, lines 23-28, where the routing

information may be exported from one database operating in one protocol to another

database operating in another protocol); and

rejecting additional routes exported to the identified one of the instances of the

interior routing protocol based on the comparison when the rule determines (column 4,

lines 52-61, where the updated mappings may be blocked by the manager).

Pesce does not expressly teach a client setting an export limit for the device. Sankaran

teaches a method for managing discard algorithms comprising:

maintaining a count of routes exported (paragraph 35, where a threshold may be

reached); and

rejecting additional routes exported when the count exceeds the export limit set

by the command (paragraph 45, where additional routes may be discarded once a

threshold is reached).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to utilize a route count and rejecting such as taught by Sankaran in a routing system

such as taught by Pesce. Pesce's system generally allows for routes to be exported

from one protocol operating on a network element to another protocol operating on a

network element. Pesce further allows for blocking routes by a manager (column 4,

lines 52-61). It would be beneficial in such a system to utilize a threshold and count of

routes for blocking, as the routing manager may operate under blocking conditions after

a threshold of a table is reached, such as a percentage of the memory being used

(paragraph 45).

Neither Pesce nor Sankaran teaches a user defined size threshold. Gaddis teaches a

method for improving databases comprising:

receiving a prefix limit command from a client to specify a limit for a table size

(column 17, lines 29-34, where a prefix limit may be set for injected routes).

It would have been obvious to utilize a user defined limit such as that taught by Gaddis

in a system for exporting routes such as that taught by either Pesce or Sankaran.

Pesce's system generally allows for routes to be exported according to definitions by a

user, including those determining whether routes may be exported (column 7, lines 11-

14). Pesce's system also allows a manager to determine when blocking conditions

occur (column 4, lines 52-61). It would be beneficial to allow for a user to determine a

maximum number of routes, such as taught by Sankaran, as the routing manager may

operate under blocking conditions after a threshold of a table is reached, such as a

percentage of the memory being used (paragraph 45). It would further be beneficial for

a user to determine the maximum, such as taught by Gaddis, this allows the user to set

further rules regarding route exporting, in addition to those as taught by Pesce.

9.   As per claim 18, Pesce teaches a system comprising:

routes exported from an external routing protocol executing on a network device

to an interior routing protocol executing on the network device in accordance with the

export limit (column 2, lines 51-64, where the network element may contain multiple

routing databases including those that may run both interior and exterior routing

protocols, also column 3, lines 23-28, where the routing information may be exported

from one database operating in one protocol to another database operating in another

protocol); and

a plurality of instances of the interior routing protocol executing on the system (column 2, lines 51-64, where the network element may contain multiple routing databases including those that may run both interior and exterior routing protocols, also column 3, lines 23-28, where the routing information may be exported from one database operating in one protocol to another database operating in another protocol),

wherein the control unit separately exports to each of the instances (column 2, lines 51-64, where the network element may contain multiple routing databases including those that may run both interior and exterior routing protocols, also column 3, lines 23-28, where the routing information may be exported from one database operating in one protocol to another database operating in another protocol), and

wherein the control unit identifies an instance of the interior routing protocol to which routes were exported, accesses the respective rule, and rejects additional routes exported from the exterior routing protocol to the identified instance based on the comparison (column 7, lines 11-14, where a user may set rules governing route exportation).

Pesce does not expressly teach a client setting an export limit for the device. Sankaran teaches a method for managing discard algorithms comprising:

maintaining a count of routes exported (paragraph 35, where a threshold may be reached); and

rejecting additional routes exported when the count exceeds the export limit set by the command (paragraph 45, where additional routes may be discarded once a threshold is reached).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to utilize a route count and rejecting such as taught by Sankaran in a routing system

such as taught by Pesce. Pesce's system generally allows for routes to be exported

from one protocol operating on a network element to another protocol operating on a

network element. Pesce further allows for blocking routes by a manager (column 4,

lines 52-61). It would be beneficial in such a system to utilize a threshold and count of

routes for blocking, as the routing manager may operate under blocking conditions after

a threshold of a table is reached, such as a percentage of the memory being used

(paragraph 45).

Neither Pesce nor Sankaran teaches a user defined size threshold. Gaddis teaches a

method for improving databases comprising:

    receiving a prefix limit command from a client to specify a limit for a table size

(column 17, lines 29-34, where a prefix limit may be set for injected routes).

It would have been obvious to utilize a user defined limit such as that taught by Gaddis

in a system for exporting routes such as that taught by either Pesce or Sankaran.

Pesce's system generally allows for routes to be exported according to definitions by a

user, including those determining whether routes may be exported (column 7, lines 11-

14). Pesce's system also allows a manager to determine when blocking conditions

occur (column 4, lines 52-61). It would be beneficial to allow for a user to determine a

maximum number of routes, such as taught by Sankaran, as the routing manager may

operate under blocking conditions after a threshold of a table is reached, such as a

percentage of the memory being used (paragraph 45). It would further be beneficial for

a user to determine the maximum, such as taught by Gaddis, this allows the user to set

further rules regarding route exporting, in addition to those as taught by Pesce.

10.   As per claim 19, Gaddis further teaches a prefix counter to count the routes

exported to the interior routing protocol and generate a prefix count, wherein the control

unit compares the prefix count to the export limit and limits the number of routes

exported to the interior routing protocol based on the comparison (column 17, lines 29-

34, where a prefix limit may be set for injected routes).

11.   As per claim 20, Gaddis further teaches rejecting additional routes to be exported

to the interior routing protocol when the prefix count exceeds the export limit (column

17, lines 29-34, where a prefix limit may be set for injected routes, and routes may be

filtered by prefix count).

12.   As per claim 21, no reference expressly teaches the exterior routing protocol

supports a larger number of routes than the interior routing protocol. However, Pesce

teaches that BGP may be utilized with OSPF on a network element. BGP protocols

maintain routes between ASes, therefore is theoretically capable of maintaining routing

information to all systems on a network. OSPF is used within an AS, and therefore

maintains routing information only with a selection of computers on the greater network

13.   As per claim 22, Gaddis further teaches communicating with an internet service

provider via the exterior routing protocol (column 1, lines 20-27, where common

connections utilize ISPs).

14.   As per claim 26, Pesce further teaches the system comprises a router (Figure 1).

15.   As per claim 39, Pesce further teaches the management interface receives the

command from a remote client (column 7, lines 11-14, where a user may set rules

governing route exportation).

16.   As per claim 40, Pesce further teaches the remote client comprises one of a

human user and an automated script (column 7, lines 11-14, where a user may set rules

governing route exportation).

17.   Claims rejected under 35 U.S.C. 103(a) as being unpatentable over US 7 328

278, Pesce et al, US 2003/0231587, Sankaran et al, and US 7 554 930, Gaddis et al as

applied to claims above, and further in view of US 6 212 188, Rochberger et al.

18.   As per claim 6, neither reference teaches a method to update the routing

information in response to a state change of the device. Rochberger teaches a method

of routing in a network when a node is in overload state comprising:

       updating routing information to set an overload bit of a link state prefix associated

       with the routes when the count exceeds the export limit (Column 2, lines 8-14,

       where the state information is contained in PTSE messages. Along with column

       5, lines 30-35, where the overloaded node sends a PTSE message to other

       nodes notifying itself as being overloaded, it is inherent that the PTSE contains

       the overload information, and is changed when the node goes into overload

       status); and

       advertising the updated routing information to a network device (Column 5, lines

       30-35, where the overloaded node sends a message to other nodes notifying

       itself as being overloaded).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to include an overload notification such as that described by Rochberger in a network

system such as that taught by Sankaran or Pesce. Pesce's system would benefit, as the

routing protocols could notify others when they are reached, relieving the processing

required to process routes. Sankaran's system would benefit, as it could notify other

devices when the address limit within a table has been reached, relieving the

processing required for rejecting additional addresses sent. The notification method

described by Rochberger can be used in any system, as it only describes how a node

reacts to being in an overload state, and does not affect the performance of the node in

normal functions. This would allow the notification method to be used in any system,

including that taught by Sankaran or Pesce.

19.   As per claim 11, Pesce teaches a method comprising:

exporting routes from an exterior routing protocol process executing on the

network device to an interior routing protocol process executing on the network device

(column 2, lines 51-64, where the network element may contain multiple routing

databases including those that may run both interior and exterior routing protocols, also

column 3, lines 23-28, where the routing information may be exported from one

database operating in one protocol to another database operating in another protocol);

and

the network device: (i) updates routing information of the interior routing protocol

to clear the routes previously exported from the exterior routing protocol, (ii) rebuilds the

routing information of the interior routing protocol by updating the routing information of

the interior routing protocol to associate interior routes with a maximum metric that

defines a maximum distance from the network device to neighboring network devices,

and (iii) advertises the updated routing information to another network device (column 5,

lines 14-16, where each entry in the table may be associated with a metric value and

scale, also column 11, lines 52-60, where routes may be associated with a metric).

Pesce does not expressly teach a client setting an export limit for the device. Sankaran

teaches a method for managing discard algorithms comprising:

   maintaining a count of routes exported (paragraph 35, where a threshold may be

reached); and

   rejecting additional routes exported when the count exceeds the export limit set

by the command (paragraph 45, where additional routes may be discarded once a

threshold is reached).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to utilize a route count and rejecting such as taught by Sankaran in a routing system

such as taught by Pesce. Pesce's system generally allows for routes to be exported

from one protocol operating on a network element to another protocol operating on a

network element. Pesce further allows for blocking routes by a manager (column 4,

lines 52-61). It would be beneficial in such a system to utilize a threshold and count of

routes for blocking, as the routing manager may operate under blocking conditions after

a threshold of a table is reached, such as a percentage of the memory being used

(paragraph 45).

Neither Pesce nor Sankaran teaches a user defined size threshold. Gaddis teaches a

method for improving databases comprising:

receiving a prefix limit command from a client to specify a limit for a table size

(column 17, lines 29-34, where a prefix limit may be set for injected routes).

It would have been obvious to utilize a user defined limit such as that taught by Gaddis

in a system for exporting routes such as that taught by either Pesce or Sankaran.

Pesce's system generally allows for routes to be exported according to definitions by a

user, including those determining whether routes may be exported (column 7, lines 11-

14). Pesce's system also allows a manager to determine when blocking conditions

occur (column 4, lines 52-61). It would be beneficial to allow for a user to determine a

maximum number of routes, such as taught by Sankaran, as the routing manager may

operate under blocking conditions after a threshold of a table is reached, such as a

percentage of the memory being used (paragraph 45). It would further be beneficial for

a user to determine the maximum, such as taught by Gaddis, this allows the user to set

further rules regarding route exporting, in addition to those as taught by Pesce.

20.   As per claim 12, Sankaran further teaches:

an export limit indicative of a maximum number of routes that can be exported

(paragraph 29, where a threshold may be established);

comparing the counted number of routes to the export limit (paragraph 35, where

a threshold may be reached); and

rejecting additional routes exported when the counted number of routes exceeds

the export limit (paragraph 45, where additional routes may be discarded once a

threshold is reached).

21.   As per claim 13, Pesce further teaches waiting for user intervention before

accepting routes (column 7, lines 11-14, where a user may set rules governing route

exportation).

22.   As per claim 15, Sankaran further teaches updating routing information when the

count exceeds the limit to clear the routes exported (paragraph 45, where routes may

be deleted from the table when a limit is reached or exceeded).

23.   As per claim 32, neither reference teaches a method to update the routing

information in response to a state change of the device. Rochberger teaches a method

of routing in a network when a node is in overload state comprising:

updating routing information to set an overload bit of a link state prefix associated

with the routes when the count exceeds the export limit (Column 2, lines 8-14,

where the state information is contained in PTSE messages. Along with column

5, lines 30-35, where the overloaded node sends a PTSE message to other

nodes notifying itself as being overloaded, it is inherent that the PTSE contains

the overload information, and is changed when the node goes into overload

status); and

advertising the updated routing information to a network device (Column 5, lines

30-35, where the overloaded node sends a message to other nodes notifying

itself as being overloaded).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include an overload notification such as that described by Rochberger in a network system such as that taught by Sankaran or Pesce. Pesce's system would benefit, as the routing protocols could notify others when they are reached, relieving the processing required to process routes. Sankaran's system would benefit, as it could notify other devices when the address limit within a table has been reached, relieving the processing required for rejecting additional addresses sent. The notification method described by Rochberger can be used in any system, as it only describes how a node reacts to being in an overload state, and does not affect the performance of the node in normal functions. This would allow the notification method to be used in any system, including that taught by Sankaran or Pesce.

24.   As per claim 33, Pesce teaches a method comprising:

directing a network device to export routes from an exterior routing protocol executing on the network device to an interior routing protocol executing on the network device (column 2, lines 51-64, where the network element may contain multiple routing databases including those that may run both interior and exterior routing protocols, also column 3, lines 23-28, where the routing information may be exported from one database operating in one protocol to another database operating in another protocol);

receiving an export rule for routes that may be exported from the exterior routing protocol to a specific instance of the interior routing protocol (column 7, lines 11-14, where a user may set rules governing route exportation);

exporting routes from the exterior routing protocol to the specific instance of the interior routing protocol (column 2, lines 51-64, where the network element may contain multiple routing databases including those that may run both interior and exterior routing protocols, also column 3, lines 23-28, where the routing information may be exported from one database operating in one protocol to another database operating in another protocol);

blocking routes from the exterior routing protocol if the rule determines the route should not be exported (column 4, lines 52-61, where the updated mappings may be blocked by the manager).

Pesce does not expressly teach a client setting an export limit for the device. Sankaran teaches a method for managing discard algorithms comprising:

maintaining a count of routes exported (paragraph 35, where a threshold may be reached); and

rejecting additional routes exported when the count exceeds the export limit set by the command (paragraph 45, where additional routes may be discarded once a threshold is reached).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a route count and rejecting such as taught by Sankaran in a routing system such as taught by Pesce. Pesce's system generally allows for routes to be exported from one protocol operating on a network element to another protocol operating on a network element. Pesce further allows for blocking routes by a manager (column 4, lines 52-61). It would be beneficial in such a system to utilize a threshold and count of

routes for blocking, as the routing manager may operate under blocking conditions after

a threshold of a table is reached, such as a percentage of the memory being used

(paragraph 45).

Neither Pesce nor Sankaran teaches a user defined size threshold. Gaddis teaches a

method for improving databases comprising:

      receiving a prefix limit command from a client to specify a limit for a table size

(column 17, lines 29-34, where a prefix limit may be set for injected routes).

It would have been obvious to utilize a user defined limit such as that taught by Gaddis

in a system for exporting routes such as that taught by either Pesce or Sankaran.

Pesce's system generally allows for routes to be exported according to definitions by a

user, including those determining whether routes may be exported (column 7, lines 11-

14). Pesce's system also allows a manager to determine when blocking conditions

occur (column 4, lines 52-61). It would be beneficial to allow for a user to determine a

maximum number of routes, such as taught by Sankaran, as the routing manager may

operate under blocking conditions after a threshold of a table is reached, such as a

percentage of the memory being used (paragraph 45). It would further be beneficial for

a user to determine the maximum, such as taught by Gaddis, this allows the user to set

further rules regarding route exporting, in addition to those as taught by Pesce.

Conclusion

      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to THOMAS RICHARDSON whose telephone number is

(571) 270-1191. The examiner can normally be reached on Monday through Thursday,

8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Vaughn can be reached on (571) 272-3922. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

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